

# SEQUENCE LISTING

<110> Kantor, Aaron B

<120> BIOMARKERS FOR DIAGNOSING RHEUMATOID ARTHRITIS

<130> 4220-99

<140> 10/801,990

<141> 2004-03-15

<150> US 60/455,037

<151> 2003-03-14

<160> 400

<170> PatentIn version 3.4

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Gly Thr Phe Ala Thr Leu Ser Glu Leu His Cys Asp Lys  
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Met His Ser Met Asn Gly Phe Met Tyr Gly Asn Gln Pro Gly Leu Thr  
1 5 10 15

Met Cys Lys

<210> 123  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 123

Phe Glu Asp Gly Val Leu Asp Pro Asp Tyr Pro Arg  
1 5 10

<210> 124  
<211> 10  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (4)..(4)  
<223> carboxymethylation

<400> 124

Gly Gln Tyr Cys Tyr Glu Leu Asp Glu Lys  
1 5 10

<210> 125

<211> 6

<212> PRT

<213> Homo sapiens

<400> 125

Ala Asn Leu Phe Asn Lys  
1 5

<210> 126

<211> 8

<212> PRT

<213> Homo sapiens

<400> 126

Tyr Thr Ala Cys Glu Thr Ala Arg  
1 5

<210> 127

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (6)..(6)

<223> carboxymethylation

<220>

<221> misc\_feature

<222> (11)..(11)

<223> carboxymethylation

<400> 127

Asp Lys Leu Ala Ala Cys Leu Glu Gly Asn Cys Ala Glu Gly Leu Gly  
1 5 10 15

Thr Asn Tyr Arg  
20

<210> 128

<211> 15

<212> PRT

<213> Homo sapiens

<400> 128

Val Gly Ala His Ala Gly Glu Tyr Gly Ala Glu Ala Leu Glu Arg  
1 5 10 15

<210> 129

<211> 30

<212> PRT

<213> Homo sapiens

<400> 129

Lys Val Ala Asp Ala Leu Thr Asn Ala Val Ala His Val Asp Asp Met  
1 5 10 15

Pro Asn Ala Leu Ser Ala Leu Ser Asp Leu His Ala His Lys  
20 25 30

<210> 130

<211> 29

<212> PRT

<213> Homo sapiens

<400> 130

Val Ala Asp Ala Leu Thr Asn Ala Val Ala His Val Asp Asp Met Pro  
1 5 10 15

Asn Ala Leu Ser Ala Leu Ser Asp Leu His Ala His Lys  
20 25

<210> 131

<211> 14

<212> PRT

<213> Homo sapiens

<400> 131

Leu Leu Asp Asn Trp Asp Ser Val Thr Ser Thr Phe Ser Lys  
1 5 10

<210> 132

<211> 11

<212> PRT

<213> Homo sapiens

<400> 132

Gln Gly Leu Leu Pro Val Leu Glu Ser Phe Lys

1 5 10

<210> 133  
<211> 20  
<212> PRT  
<213> Homo sapiens

<400> 133

Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro  
1 5 10 15

Glu Gln Trp Lys  
20

<210> 134  
<211> 19  
<212> PRT  
<213> Homo sapiens

<400> 134

Leu Gln Gln Val Leu His Ala Gly Ser Gly Pro Cys Leu Pro His Leu  
1 5 10 15

Leu Ser Arg

<210> 135  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 135

Gln Val Glu Gly Met Glu Asp Trp Lys  
1 5

<210> 136  
<211> 17  
<212> PRT  
<213> Homo sapiens

<400> 136

Glu Gln Leu Gly Glu Phe Tyr Glu Ala Leu Asp Cys Leu Cys Ile Pro  
1 5 10 15

Arg

<210> 137  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 137

Met Leu Ser Leu Gly Thr Lys  
1 5

<210> 138  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 138

Ala Thr Gly Ile Pro Asp Arg  
1 5

<210> 139  
<211> 15  
<212> PRT  
<213> Homo sapiens

<400> 139

Glu Glu Glu Gln Gln Arg Cys Glu Ser Leu Ala Glu Val Asn Thr  
1 5 10 15

<210> 140  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 140

Met Asn Gln Leu Thr Gln Glu Leu Phe Ser Leu Lys  
1 5 10

<210> 141  
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<212> PRT  
<213> Homo sapiens

<400> 141

Val Thr Ser Thr Leu Thr Ile Lys  
1 5

<210> 142  
<211> 13  
<212> PRT  
<213> Homo sapiens

<400> 142

Asn Val Pro Leu Pro Val Ile Ala Glu Leu Pro Pro Lys  
1 5 10

<210> 143  
<211> 16  
<212> PRT  
<213> Homo sapiens

<400> 143

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys  
1 5 10 15

<210> 144  
<211> 17  
<212> PRT  
<213> Homo sapiens

<400> 144

Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser  
1 5 10 15

Lys

<210> 145  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 145

Leu Pro Glu Cys Glu Ala Val Cys Gly Lys  
1 5 10

<210> 146  
<211> 19  
<212> PRT  
<213> Homo sapiens

<400> 146

Arg Leu Tyr Gly Ser Glu Ala Phe Ala Thr Asp Phe Gln Asp Ser Ala  
1 5 10 15



Ala Ala Lys

<210> 147  
<211> 14  
<212> PRT  
<213> Homo sapiens

<400> 147

Glu His Ala Val Glu Gly Asp Cys Asp Phe Gln Leu Leu Lys  
1 5 10

<210> 148  
<211> 20  
<212> PRT  
<213> Homo sapiens

<220>  
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<222> (5)..(5)  
<223> carboxymethylation

<220>  
<221> misc\_feature  
<222> (14)..(14)  
<223> carboxymethylation

<400> 148

Lys Glu Asp Ser Cys Gln Leu Gly Tyr Ser Ala Gly Pro Cys Met Gly  
1 5 10 15

Met Thr Ser Arg  
20

<210> 149  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 149

Glu Gln Leu Thr Pro Leu Ile Lys  
1 5

<210> 150  
<211> 10  
<212> PRT

<213> Homo sapiens

<400> 150

Glu Gln His Pro Asp Met Ser Val Thr Arg  
1 5 10

<210> 151

<211> 13

<212> PRT

<213> Homo sapiens

<400> 151

Ala Gly Ala Leu Asn Ser Asn Asp Ala Phe Val Leu Lys  
1 5 10

<210> 152

<211> 19

<212> PRT

<213> Homo sapiens

<400> 152

Gly Ser Leu Val Gln Ala Ser Glu Ala Asn Leu Gln Ala Ala Gln Asp  
1 5 10 15

Phe Val Arg

<210> 153

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (8)..(8)

<223> carboxymethylation

<400> 153

Ile Ala Ser Phe Ser Gln Asn Cys Asp Ile Tyr Pro Gly Lys  
1 5 10

<210> 154

<211> 33

<212> PRT

<213> Homo sapiens

<400> 154

Cys Gly Leu Val Pro Val Leu Ala Glu Asn Tyr Lys Ser Gln Gln Ser  
1 5 10 15

Ser Asp Pro Asp Pro Asn Cys Val Asp Arg Pro Val Glu Gly Tyr Leu  
20 25 30

Ala

<210> 155  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 155

Ile Ser Asn Ile Pro Asp Glu Tyr Phe Lys  
1 5 10

<210> 156  
<211> 11  
<212> PRT  
<213> Homo sapiens

<400> 156

Ser Leu Glu Asp Leu Gln Leu Thr His Asn Lys  
1 5 10

<210> 157  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 157

Gln Asn Gly Gly Leu Ala Thr Val Glu  
1 5

<210> 158  
<211> 15  
<212> PRT  
<213> Homo sapiens

<220>  
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<222> (1)..(1)  
<223> oxidation

<220>  
<221> misc\_feature  
<222> (2)..(2)  
<223> carboxymethylation

<220>  
<221> misc\_feature  
<222> (10)..(10)  
<223> carboxymethylation

<400> 158

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asp Ser Lys  
1 5 10 15

<210> 159  
<211> 18  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (8)..(8)  
<223> carboxymethylation

<400> 159

Leu Leu Asn Leu Asp Gly Thr Cys Ala Asp Ser Tyr Ser Phe Val Phe  
1 5 10 15

Ser Arg

<210> 160  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 160

Ala Gly Lys Ser Thr Phe Leu Lys Lys His  
1 5 10

<210> 161  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 161

Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly  
1 5 10 15

Glu Arg

<210> 162  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 162

Glu Gly Leu Cys Cys Gly Pro Ser Ile Pro Pro Val  
1 5 10

<210> 163  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 163

Ala Ala Tyr Met Asn Lys Glu Arg  
1 5

<210> 164  
<211> 11  
<212> PRT  
<213> Homo sapiens

<400> 164

Tyr Tyr Cys Phe Gln Gly Asn Gln Phe Leu Arg  
1 5 10

<210> 165  
<211> 14  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (7)..(7)  
<223> carboxymethylation

<400> 165

Gly Gly Cys Leu Pro Pro Cys Asp Gly Gly Pro Lys Ser Arg  
1 5 10

<210> 166

<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 166

Ala Ser Asp Asp Asp Val Gly Glu Asn Ala Arg Ile  
1 5 10

<210> 167  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 167

Glu Glu Ala Ile Ala Val Thr Met Arg  
1 5

<210> 168  
<211> 14  
<212> PRT  
<213> Homo sapiens

<400> 168

Tyr Asn Pro Asp Ser Gly Leu Glu Val Leu Ala Val Gln Arg  
1 5 10

<210> 169  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 169

Ile Val Asp Leu Val Lys Glu Leu Asp Arg  
1 5 10

<210> 170  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 170

His Lys Leu Ile His Thr Gly Val Lys Ser His Ala Cys Glu Gln Cys  
1 5 10 15

Gly Lys

<210> 171  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 171

Val Phe Trp Arg Ser Ser Gly Leu Pro His Pro Ser Gln Ala Gln Ser  
1 5 10 15

Ala Arg

<210> 172  
<211> 16  
<212> PRT  
<213> Homo sapiens

<220>  
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<222> (7)..(7)  
<223> carboxymethylation

<400> 172

Gly Asn Ala Leu Ser Val Cys Ser Arg Glu Ser Pro Gly Ser Lys Lys  
1 5 10 15

<210> 173  
<211> 36  
<212> PRT  
<213> Homo sapiens

<400> 173

Cys Leu Gln Arg Ile Val Thr Lys Leu Gln Met Glu Ala Gly Leu Cys  
1 5 10 15

Glu Glu Gln Leu Asn Gln Ala Asp Ala Leu Leu Gln Ser Asp Val Arg  
20 25 30

Leu Leu Ala Ala  
35

<210> 174  
<211> 20  
<212> PRT  
<213> Homo sapiens

<400> 174

Ile Ile Thr His Pro Asn Phe Asn Gly Asn Thr Leu Asp Asn Asp Ile  
1 5 10 15

Met Leu Ile Lys  
20

<210> 175

<211> 15

<212> PRT

<213> Homo sapiens

<400> 175

Phe Thr Val Asp Arg Pro Phe Leu Phe Leu Ile Tyr Glu His Arg  
1 5 10 15

<210> 176

<211> 11

<212> PRT

<213> Homo sapiens

<400> 176

Gly Gly Ser Ile Phe Gly Leu Ala Pro Gly Lys  
1 5 10

<210> 177

<211> 9

<212> PRT

<213> Homo sapiens

<400> 177

Gly Gln Gly Lys Pro Pro Val Trp Arg  
1 5

<210> 178

<211> 31

<212> PRT

<213> Homo sapiens

<400> 178

Ala Val Gly Asp Lys Leu Pro Glu Cys Glu Ala Asp Asp Gly Cys Pro  
1 5 10 15

Lys Pro Pro Glu Ile Ala His Gly Tyr Val Glu His Ser Val Arg  
20 25 30



<210> 179  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 179

Phe Ser Glu Gly Cys Ala Pro Gly Ser Lys  
1 5 10

<210> 180  
<211> 15  
<212> PRT  
<213> Homo sapiens

<400> 180

Leu Cys Met Gly Ser Gly Leu Asn Leu Cys Glu Pro Asn Asn Lys  
1 5 10 15

<210> 181  
<211> 20  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (4)..(4)  
<223> carboxymethylation

<400> 181

Ser Asp Asn Cys Glu Asp Thr Pro Glu Ala Gly Tyr Phe Ala Val Ala  
1 5 10 15

Val Val Lys Lys  
20

<210> 182  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 182

Tyr Leu Gly Glu Glu Tyr Val Lys  
1 5

<210> 183  
<211> 22

<212> PRT  
<213> Homo sapiens

<400> 183

Ser Met Gly Gly Lys Glu Asp Leu Ile Trp Glu Leu Leu Asn Gln Ala  
1 5 10 15

Gln Glu His Phe Gly Lys  
20

<210> 184  
<211> 15  
<212> PRT  
<213> Homo sapiens

<400> 184

Leu Cys Met Gly Ser Gly Leu Asn Leu Cys Glu Pro Asn Asn Lys  
1 5 10 15

<210> 185  
<211> 6  
<212> PRT  
<213> Homo sapiens

<400> 185

Asp Ser Ser Leu Cys Lys  
1 5

<210> 186  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 186

Gln Ile Asn Asp Tyr Val Glu Lys  
1 5

<210> 187  
<211> 6  
<212> PRT  
<213> Homo sapiens

<400> 187

Phe Leu Glu Asp Val Lys  
1 5

<210> 188  
<211> 14  
<212> PRT  
<213> Homo sapiens

<400> 188

Ile Thr Pro Asn Leu Ala Glu Phe Ala Phe Ser Leu Tyr Arg  
1 5 10

<210> 189  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 189

Leu Tyr His Ser Glu Ala Phe Thr Val Asn Phe Gly Asp Thr Glu Glu  
1 5 10 15

Ala Lys

<210> 190  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 190

Val Phe Ser Asn Gly Ala Asp Leu Ser Gly Val Thr Glu Glu Ala Pro  
1 5 10 15

Leu Lys

<210> 191  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 191

Lys Gln Ile Asn Asp Tyr Val Glu Lys  
1 5

<210> 192  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 192

Ser Val Leu Gly Gln Leu Gly Ile Thr Lys  
1 5 10

<210> 193

<211> 9

<212> PRT

<213> Homo sapiens

<400> 193

Lys Gln Ile Asn Asp Tyr Val Glu Lys  
1 5

<210> 194

<211> 15

<212> PRT

<213> Homo sapiens

<400> 194

Thr Asp Thr Ser His His Asp Gln Asp His Pro Thr Phe Asn Lys  
1 5 10 15

<210> 195

<211> 7

<212> PRT

<213> Homo sapiens

<400> 195

Ser Pro Leu Phe Met Gly Lys  
1 5

<210> 196

<211> 8

<212> PRT

<213> Homo sapiens

<400> 196

Ser Ala Ser Leu His Leu Pro Lys  
1 5

<210> 197

<211> 8

<212> PRT

<213> Homo sapiens

<400> 197

Ser Ala Ser Leu His Leu Pro Lys  
1 5

<210> 198  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 198

Trp Glu Arg Pro Phe Glu Val Lys  
1 5

<210> 199  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 199

Ala Val Leu Thr Ile Asp Glu Lys  
1 5

<210> 200  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 200

Glu Asp Pro Gln Gly Asp Ala Ala Gln Lys  
1 5 10

<210> 201  
<211> 22  
<212> PRT  
<213> Homo sapiens

<400> 201

Gly Thr Glu Ala Ala Gly Ala Met Phe Leu Glu Ala Ile Pro Met Ser  
1 5 10 15

Ile Pro Pro Glu Val Lys  
20

<210> 202  
<211> 16  
<212> PRT  
<213> Homo sapiens

<400> 202

Asp Thr Glu Glu Asp Phe His Val Asp Gln Val Thr Thr Val Lys  
1 5 10 15

<210> 203

<211> 8

<212> PRT

<213> Homo sapiens

<400> 203

Gln Ile Asn Asp Tyr Val Glu Lys  
1 5

<210> 204

<211> 8

<212> PRT

<213> Homo sapiens

<400> 204

Phe Leu Glu Asn Glu Asp Arg Arg  
1 5

<210> 205

<211> 10

<212> PRT

<213> Homo sapiens

<400> 205

Lys Leu Ser Ser Trp Val Leu Leu Met Lys  
1 5 10

<210> 206

<211> 24

<212> PRT

<213> Homo sapiens

<400> 206

Thr Leu Asn Gln Pro Asp Ser Gln Leu Gln Leu Thr Thr Gly Asn Gly  
1 5 10 15

Leu Phe Leu Ser Glu Gly Leu Lys  
20

<210> 207

<211> 11

<212> PRT

<213> Homo sapiens

<400> 207

Leu Val Asp Lys Phe Leu Glu Asp Val Lys Lys  
1 5 10

<210> 208

<211> 5

<212> PRT

<213> Homo sapiens

<400> 208

Val Pro Met Met Lys  
1 5

<210> 209

<211> 17

<212> PRT

<213> Homo sapiens

<400> 209

Glu Leu Asp Arg Asp Thr Val Phe Ala Leu Val Asn Tyr Ile Phe Phe  
1 5 10 15

Lys

<210> 210

<211> 19

<212> PRT

<213> Homo sapiens

<400> 210

Leu Tyr His Ser Glu Ala Phe Thr Val Asn Phe Gly Asp Thr Glu Glu  
1 5 10 15

Ala Lys Lys

<210> 211

<211> 34

<212> PRT

<213> Homo sapiens

<400> 211

Met Phe Asn Ile Gln His Cys Lys Lys Leu Ser Ser Trp Val Leu Leu

1	5	10	15
Met Lys Tyr	Leu Gly Asn Ala Thr Ala	Ile Phe Phe Leu Pro Asp Glu	
	20	25	30

Gly Lys

<210> 212  
 <211> 6  
 <212> PRT  
 <213> Homo sapiens

<400> 212

Val Ser Val	Asn Glu Arg
1	5

<210> 213  
 <211> 6  
 <212> PRT  
 <213> Homo sapiens

<400> 213

Lys Gln Trp	Ile Asn Lys
1	5

<210> 214  
 <211> 9  
 <212> PRT  
 <213> Homo sapiens

<400> 214

His Thr Phe	Cys Ala Gly Met Ser Lys
1	5

<210> 215  
 <211> 10  
 <212> PRT  
 <213> Homo sapiens

<400> 215

His Tyr Glu	Gly Ser Thr Val Pro Glu Lys
1	5 10

<210> 216  
 <211> 12



<212> PRT  
<213> Homo sapiens

<400> 216

Thr Glu Gly Asp Gly Val Tyr Thr Leu Asn Asp Lys  
1 5 10

<210> 217  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 217

Asp Ile Ala Pro Thr Leu Thr Leu Tyr Val Gly Lys  
1 5 10

<210> 218  
<211> 34  
<212> PRT  
<213> Homo sapiens

<400> 218

Tyr Gln Glu Asp Thr Cys Tyr Gly Asp Ala Gly Ser Ala Phe Ala Val  
1 5 10 15

His Asp Leu Glu Glu Asp Thr Trp Tyr Ala Thr Gly Ile Leu Ser Phe  
20 25 30

Asp Lys

<210> 219  
<211> 11  
<212> PRT  
<213> Homo sapiens

<400> 219

His Tyr Glu Gly Ser Thr Val Pro Glu Lys Lys  
1 5 10

<210> 220  
<211> 13  
<212> PRT  
<213> Homo sapiens

<400> 220

Thr Glu Gly Asp Gly Val Tyr Thr Leu Asn Asp Lys Lys  
1 5 10

<210> 221  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 221

Gln Leu Val Glu Ile Glu Lys  
1 5

<210> 222  
<211> 6  
<212> PRT  
<213> Homo sapiens

<400> 222

Val Ser Val Asn Glu Arg  
1 5

<210> 223  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 223

Asn Pro Ala Asn Pro Val Gln  
1 5

<210> 224  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 224

Asp Tyr Ala Glu Val Gly Arg  
1 5

<210> 225  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 225

Ser Cys Ala Val Ala Glu Tyr Gly Val Tyr Val Lys  
1 5 10

<210> 226  
<211> 20  
<212> PRT  
<213> Homo sapiens

<400> 226

Ser Pro Val Gly Val Gln Pro Ile Leu Asn Glu His Thr Phe Cys Ala  
1 5 10 15

Gly Met Ser Lys  
20

<210> 227  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 227

Val Thr Ser Ile Gln Asp Trp Val Gln Lys  
1 5 10

<210> 228  
<211> 17  
<212> PRT  
<213> Homo sapiens

<400> 228

Ala Val Gly Asp Lys Leu Pro Glu Cys Glu Ala Val Cys Gly Lys Pro  
1 5 10 15

Lys

<210> 229  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 229

Val Gly Tyr Val Ser Gly Trp Gly Arg  
1 5

<210> 230  
<211> 13  
<212> PRT

<213> Homo sapiens

<400> 230

Asp Ile Ala Pro Thr Leu Thr Leu Tyr Val Gly Lys Lys  
1 5 10

<210> 231

<211> 9

<212> PRT

<213> Homo sapiens

<400> 231

Ile Leu Gly Gly His Leu Asp Ala Lys  
1 5

<210> 232

<211> 4

<212> PRT

<213> Homo sapiens

<400> 232

Asn Tyr Tyr Lys  
1

<210> 233

<211> 26

<212> PRT

<213> Homo sapiens

<400> 233

Leu Pro Glu Cys Glu Ala Asp Asp Gly Cys Pro Lys Pro Pro Glu Ile  
1 5 10 15

Ala His Gly Tyr Val Glu His Ser Val Arg  
20 25

<210> 234

<211> 31

<212> PRT

<213> Homo sapiens

<400> 234

Val Asp Ser Gly Asn Asp Val Thr Asp Ile Ala Asp Asp Gly Cys Pro  
1 5 10 15

Lys Pro Pro Glu Ile Ala His Gly Tyr Val Glu His Ser Val Arg

20

25

30

<210> 235  
 <211> 15  
 <212> PRT  
 <213> Homo sapiens

<400> 235

Leu Arg Thr Glu Gly Asp Gly Val Tyr Thr Leu Asn Asp Lys Lys  
 1 5 10 15

<210> 236  
 <211> 28  
 <212> PRT  
 <213> Homo sapiens

<400> 236

Gln Lys Asp Val Asp Lys Glu Phe Tyr Leu Phe Pro Thr Val Phe Asp  
 1 5 10 15

Glu Asn Glu Ser Leu Leu Leu Glu Asp Asn Ile Arg  
 20 25

<210> 237  
 <211> 20  
 <212> PRT  
 <213> Homo sapiens

<400> 237

Ala Glu Glu Glu His Leu Gly Ile Leu Gly Pro Gln Leu His Ala Asp  
 1 5 10 15

Val Gly Asp Lys  
 20

<210> 238  
 <211> 13  
 <212> PRT  
 <213> Homo sapiens

<400> 238

Val Asp Lys Asp Asn Glu Asp Phe Gln Glu Ser Asn Arg  
 1 5 10

<210> 239  
 <211> 10

<212> PRT  
<213> Homo sapiens

<400> 239

Ile Tyr His Ser His Ile Asp Ala Pro Lys  
1 5 10

<210> 240  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 240

Thr Tyr Cys Ser Glu Pro Glu Lys  
1 5

<210> 241  
<211> 14  
<212> PRT  
<213> Homo sapiens

<400> 241

Glu Val Gly Pro Thr Asn Ala Asp Pro Val Cys Leu Ala Lys  
1 5 10

<210> 242  
<211> 14  
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<400> 242

Asp Ile Ala Ser Gly Leu Ile Gly Pro Leu Ile Ile Cys Lys  
1 5 10

<210> 243  
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<212> PRT  
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<400> 243

Leu Ile Ser Val Asp Thr Glu His Ser Asn Ile Tyr Leu Gln Asn Gly  
1 5 10 15

Pro Asp Arg

<210> 244  
<211> 35  
<212> PRT  
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<400> 244

Asn Met Ala Thr Arg Pro Tyr Ser Ile His Ala His Gly Val Gln Thr  
1 5 10 15

Glu Ser Ser Thr Val Thr Pro Thr Leu Pro Gly Glu Thr Leu Thr Tyr  
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Val Trp Lys  
35

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<400> 245

Ala Leu Tyr Leu Gln Tyr Thr Asp Glu Thr Phe Arg  
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Gln Tyr Thr Asp Ser Thr Phe Arg  
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<400> 247

Met Tyr Tyr Ser Ala Val Asp Pro Thr Lys  
1 5 10

<210> 248  
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<400> 248

His Tyr Tyr Ile Gly Ile Ile Glu Thr Thr Trp Asp Tyr Ala Ser Asp  
1 5 10 15

His Gly Glu Lys  
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<210> 249

<211> 23

<212> PRT

<213> Homo sapiens

<400> 249

Gly Pro Glu Glu Glu His Leu Gly Ile Leu Gly Pro Val Ile Trp Ala  
1 5 10 15

Glu Val Gly Asp Thr Ile Arg  
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<400> 250

Glu Tyr Thr Asp Ala Ser Phe Thr Asn Arg  
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<210> 251

<211> 20

<212> PRT

<213> Homo sapiens

<400> 251

Lys Leu Ile Ser Val Asp Thr Glu His Ser Asn Ile Tyr Leu Gln Asn  
1 5 10 15

Gly Pro Asp Arg  
20

<210> 252

<211> 19

<212> PRT

<213> Homo sapiens

<400> 252



Met His Ser Met Asn Gly Phe Met Tyr Gly Asn Gln Pro Gly Leu Thr  
1 5 10 15

Met Cys Lys

<210> 253  
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<400> 253

Asp Leu Tyr Ser Gly Leu Ile Gly Pro Leu Ile Val Cys Arg  
1 5 10

<210> 254  
<211> 13  
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<400> 254

Gly Ala Tyr Pro Leu Ser Ile Glu Pro Ile Gly Val Arg  
1 5 10

<210> 255  
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<212> PRT  
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<400> 255

Val Phe Asn Pro Arg  
1 5

<210> 256  
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<212> PRT  
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<400> 256

Lys Ala Glu Glu Glu His Leu Gly Ile Leu Gly Pro Gln Leu His Ala  
1 5 10 15

Asp Val Gly Asp Lys  
20

<210> 257  
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<400> 257

Arg Gln Ser Glu Asp Ser Thr Phe Tyr Leu Gly Glu Arg  
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<210> 258  
<211> 7  
<212> PRT  
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<400> 258

Tyr Thr Val Asn Gln Cys Arg  
1 5

<210> 259  
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<212> PRT  
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<400> 259

Val Asp Ser His Phe Arg  
1 5

<210> 260  
<211> 13  
<212> PRT  
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<400> 260

Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe  
1 5 10

<210> 261  
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<212> PRT  
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<400> 261

Asn Glu Cys Phe Leu Gln His Lys  
1 5

<210> 262  
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<212> PRT  
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<400> 262

Gln Thr Ala Leu Val Glu Leu Val Lys  
1 5

<210> 263  
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<400> 263

Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn  
1 5 10

<210> 264  
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<212> PRT  
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<400> 264

Ala Asp Leu Ser Gly Ile Thr Gly Ala Arg  
1 5 10

<210> 265  
<211> 19  
<212> PRT  
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<400> 265

Ala Val Leu Asp Val Phe Glu Glu Gly Thr Glu Ala Ser Ala Ala Thr  
1 5 10 15

Ala Val Lys

<210> 266  
<211> 15  
<212> PRT  
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<400> 266

Met Glu Glu Val Glu Ala Met Leu Leu Pro Glu Thr Leu Lys Arg  
1 5 10 15

<210> 267  
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<400> 267

Asn Leu Ala Val Ser Gln Val Val His Lys  
1 5 10

<210> 268  
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<400> 268

Ala Asp Leu Ser Gly Ile Thr Gly Ala Arg  
1 5 10

<210> 269  
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<400> 269

Ile Thr Leu Leu Ser Ala Leu Val Glu Thr Arg  
1 5 10

<210> 270  
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<400> 270

Asp Glu Glu Leu Ser Cys Thr Val Val Glu Leu Lys  
1 5 10

<210> 271  
<211> 22  
<212> PRT  
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<400> 271

Phe Asn Arg Pro Phe Leu Met Ile Ile Val Pro Thr Asp Thr Gln Asn  
1 5 10 15

Ile Phe Phe Met Ser Lys  
20

<210> 272  
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<400> 272

Leu Tyr Gly Ser Glu Ala Phe Ala Thr Asp Phe Gln Asp Ser Ala Ala  
1 5 10 15

Ala Lys

<210> 273  
<211> 20  
<212> PRT  
<213> Homo sapiens

<400> 273

Asp Tyr Asn Leu Asn Asp Ile Leu Leu Gln Leu Gly Ile Glu Glu Ala  
1 5 10 15

Phe Thr Ser Lys  
20

<210> 274  
<211> 8  
<212> PRT  
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<400> 274

Lys Leu Ile Asn Asp Tyr Val Lys  
1 5

<210> 275  
<211> 6  
<212> PRT  
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<400> 275

Asp Ser Leu Glu Phe Arg  
1 5

<210> 276  
<211> 23  
<212> PRT

<213> Homo sapiens

<400> 276

Asn Ala Leu Thr Gly Leu Pro Pro Gly Leu Phe Gln Ala Ser Ala Thr  
1 5 10 15

Leu Asp Thr Leu Val Leu Lys  
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<210> 277

<211> 6

<212> PRT

<213> Homo sapiens

<400> 277

Asp Cys Gln Val Phe Arg  
1 5

<210> 278

<211> 9

<212> PRT

<213> Homo sapiens

<400> 278

Gly Gln Thr Leu Leu Ala Val Ala Lys  
1 5

<210> 279

<211> 7

<212> PRT

<213> Homo sapiens

<400> 279

Gly Pro Leu Gln Leu Glu Arg  
1 5

<210> 280

<211> 21

<212> PRT

<213> Homo sapiens

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Asp Gly Phe Asp Ile Ser Gly Asn Pro Trp Ile Cys Asp Gln Asn Leu  
1 5 10 15

Ser Asp Leu Tyr Arg

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<211> 26  
<212> PRT  
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Leu Gln Glu Leu His Leu Ser Ser Asn Gly Leu Glu Ser Leu Ser Pro  
1 5 10 15

Glu Phe Leu Arg Pro Val Pro Gln Leu Arg  
20 25

<210> 282  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 282

Thr Leu Asp Leu Gly Glu Asn Gln Leu Glu Thr Leu Pro Pro Asp Leu  
1 5 10 15

Leu Arg

<210> 283  
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<212> PRT  
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<400> 283

Asp Leu Leu Leu Pro Gln Pro Asp Leu Arg  
1 5 10

<210> 284  
<211> 11  
<212> PRT  
<213> Homo sapiens

<400> 284

Ala Leu Gly His Leu Asp Leu Ser Gly Asn Arg  
1 5 10

<210> 285  
<211> 8

<212> PRT  
<213> Homo sapiens

<400> 285

Cys Ala Gly Pro Glu Ala Val Lys  
1 5

<210> 286  
<211> 16  
<212> PRT  
<213> Homo sapiens

<400> 286

Glu Asn Gln Leu Glu Val Leu Glu Val Ser Trp Leu His Gly Leu Lys  
1 5 10 15

<210> 287  
<211> 14  
<212> PRT  
<213> Homo sapiens

<400> 287

Glu Gln Leu Gly Glu Phe Tyr Glu Ala Leu Asp Cys Leu Arg  
1 5 10

<210> 288  
<211> 9  
<212> PRT  
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<400> 288

Lys Asp Lys Cys Glu Pro Leu Glu Lys  
1 5

<210> 289  
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<212> PRT  
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<400> 289

Cys Glu Pro Leu Glu Lys  
1 5

<210> 290  
<211> 9  
<212> PRT  
<213> Homo sapiens



<400> 290

Lys Asp Lys Cys Glu Pro Leu Glu Lys  
1 5

<210> 291

<211> 27

<212> PRT

<213> Homo sapiens

<400> 291

Thr Tyr Met Leu Ala Phe Asp Val Asn Asp Glu Lys Asn Trp Gly Leu  
1 5 10 15

Ser Val Tyr Ala Asp Lys Pro Glu Thr Thr Lys  
20 25

<210> 292

<211> 12

<212> PRT

<213> Homo sapiens

<400> 292

Thr Tyr Met Leu Ala Phe Asp Val Asn Asp Glu Lys  
1 5 10

<210> 293

<211> 8

<212> PRT

<213> Homo sapiens

<400> 293

Asp Lys Cys Glu Pro Leu Glu Lys  
1 5

<210> 294

<211> 10

<212> PRT

<213> Homo sapiens

<400> 294

Ser Asp Val Val Tyr Thr Asp Trp Lys Lys  
1 5 10

<210> 295

<211> 29

<212> PRT  
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<220>  
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<222> (27)..(27)  
<223> carboxymethylation

<400> 295

Asn Trp Gly Leu Ser Val Tyr Ala Asp Lys Pro Glu Thr Thr Lys Glu  
1 5 10 15

Gln Leu Gly Glu Phe Tyr Glu Ala Leu Asp Cys Leu Arg  
20 25

<210> 296  
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<212> PRT  
<213> Homo sapiens

<400> 296

Asp Thr Leu Met Ile Ser Arg  
1 5

<210> 297  
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<212> PRT  
<213> Homo sapiens

<400> 297

Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu  
1 5 10 15

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys  
20 25 30

<210> 298  
<211> 19  
<212> PRT  
<213> Homo sapiens

<400> 298

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro  
1 5 10 15

Glu Val Lys

<210> 299  
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<212> PRT  
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<400> 299

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys  
1 5 10

<210> 300  
<211> 14  
<212> PRT  
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<400> 300

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys  
1 5 10

<210> 301  
<211> 16  
<212> PRT  
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<400> 301

Ser Asn Leu Asp Glu Asp Ile Ile Ala Glu Glu Asn Ile Val Ser Arg  
1 5 10 15

<210> 302  
<211> 7  
<212> PRT  
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<400> 302

Val Val Pro Glu Gly Ile Arg  
1 5

<210> 303  
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<212> PRT  
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<400> 303

Phe Ala Leu Val Arg  
1 5

<210> 304  
<211> 9  
<212> PRT  
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<400> 304

Cys Leu Ala Pro Leu Glu Gly Ala Arg  
1 5

<210> 305  
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<212> PRT  
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<400> 305

Leu Glu Leu His Val Asp Gly Pro Pro Pro Arg Pro Gln Leu Arg  
1 5 10 15

<210> 306  
<211> 19  
<212> PRT  
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<400> 306

Ile Phe Phe His Leu Asn Ala Val Ala Leu Gly Asp Gly Gly His Tyr  
1 5 10 15

Thr Cys Arg

<210> 307  
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<212> PRT  
<213> Homo sapiens

<400> 307

Val Glu Ile Asp Thr Lys  
1 5

<210> 308  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 308

Asp Asp Glu Glu Phe Ile Glu Ser Asn Lys

1 5 10

<210> 309  
<211> 29  
<212> PRT  
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<400> 309

Val Tyr Pro Gly Glu Gln Tyr Thr Tyr Met Leu Leu Ala Thr Glu Glu  
1 5 10 15

Gln Ser Pro Gly Glu Gly Asp Gly Asn Cys Val Thr Arg  
20 25

<210> 310  
<211> 21  
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<220>  
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<222> (3)..(3)  
<223> carboxymethylation

<400> 310

Thr Tyr Cys Ser Glu Pro Glu Lys Val Asp Lys Asp Asn Glu Asp Phe  
1 5 10 15

Gln Glu Ser Asn Arg  
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<210> 311  
<211> 13  
<212> PRT  
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<400> 311

Lys Ala Leu Tyr Leu Gln Tyr Thr Asp Glu Thr Phe Arg  
1 5 10

<210> 312  
<211> 16  
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<400> 312

Asp Trp His Gly Val Pro Gly Gln Val Asp Ala Ala Met Ala Gly Arg  
1 5 10 15

<210> 313  
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<212> PRT  
<213> Homo sapiens

<400> 313

Ile Tyr Ile Ser Gly Met Ala Pro Arg  
1 5

<210> 314  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 314

Leu Ala Ile Pro Glu Gly Lys  
1 5

<210> 315  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 315

Ser Pro Ala Phe Thr Asp Leu His Leu Arg  
1 5 10

<210> 316  
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<212> PRT  
<213> Homo sapiens

<400> 316

Val Ala Ala Glu Asp Trp Lys  
1 5

<210> 317  
<211> 17  
<212> PRT  
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<400> 317

Gln Glu Pro Ser Gln Gly Thr Thr Thr Phe Ala Val Thr Ser Ile Leu  
1 5 10 15

Arg

<210> 318  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 318

Trp Leu Gln Gly Ser Gln Glu Leu Pro Arg  
1 5 10

<210> 319  
<211> 17  
<212> PRT  
<213> Homo sapiens

<400> 319

Gln Glu Pro Ser Gln Gly Thr Thr Thr Phe Ala Val Thr Ser Ile Leu  
1 5 10 15

Arg

<210> 320  
<211> 11  
<212> PRT  
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<220>  
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<223> carboxymethylation

<400> 320

Leu Ile Cys Gln Ala Thr Gly Phe Ser Pro Arg  
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<210> 321  
<211> 25  
<212> PRT  
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<220>  
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<222> (24)..(24)  
<223> carboxymethylation

<400> 321

Tyr Ala Ala Thr Ser Gln Val Leu Leu Pro Ser Lys Asp Val Met Gln  
1 5 10 15

Gly Thr Asp Glu His Val Val Cys Lys  
20 25

<210> 322  
<211> 13  
<212> PRT  
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<220>  
<221> misc\_feature  
<222> (5)..(5)  
<223> carboxymethylation

<400> 322

Ser Lys Leu Ile Cys Gln Ala Thr Gly Phe Ser Pro Arg  
1 5 10

<210> 323  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 323

Ser Leu Gly Glu Cys Cys Asp Val Glu Asp Ser Thr Thr Cys Phe Asn  
1 5 10 15

Ala Lys

<210> 324  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 324

Val Leu Glu Pro Thr Leu Lys  
1 5

<210> 325



<211> 22  
<212> PRT  
<213> Homo sapiens

<400> 325

Val Pro Thr Ala Asp Leu Glu Asp Val Leu Pro Leu Ala Glu Asp Ile  
1 5 10 15

Thr Asn Ile Leu Ser Lys  
20

<210> 326  
<211> 19  
<212> PRT  
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<400> 326

Leu Ala Val Thr Thr His Gly Leu Pro Cys Leu Ala Trp Ala Ser Ala  
1 5 10 15

Gln Ala Lys

<210> 327  
<211> 9  
<212> PRT  
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<400> 327

Leu Ser Pro Leu Gly Glu Glu Met Arg  
1 5

<210> 328  
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<212> PRT  
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<400> 328

Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr  
1 5 10 15

Val Ala Trp Lys  
20

<210> 329  
<211> 8

<212> PRT  
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<400> 329

Leu Thr Val Leu Gly Gln Pro Lys  
1 5

<210> 330  
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<400> 330

Leu Cys Gln Asp Leu Gly Pro Gly Ala Phe Arg  
1 5 10

<210> 331  
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<212> PRT  
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<400> 331

Phe Ala Phe Asn Leu Tyr Arg  
1 5

<210> 332  
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<212> PRT  
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<400> 332

Glu Val Leu Leu Pro Lys  
1 5

<210> 333  
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<212> PRT  
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<400> 333

Gln Lys Trp Glu Ala Glu Pro Val Tyr Val Gln Arg  
1 5 10

<210> 334  
<211> 9  
<212> PRT  
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<400> 334

Ser Asp Val Met Tyr Thr Asp Trp Lys  
1 5

<210> 335

<211> 9

<212> PRT

<213> Homo sapiens

<400> 335

Glu Gln Ile Asn Asn Tyr Val Glu Lys  
1 5

<210> 336

<211> 20

<212> PRT

<213> Homo sapiens

<400> 336

Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu  
1 5 10 15

Gln Asp Ser Lys  
20

<210> 337

<211> 20

<212> PRT

<213> Homo sapiens

<400> 337

Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu  
1 5 10 15

Gln Asp Ser Lys  
20

<210> 338

<211> 6

<212> PRT

<213> Homo sapiens

<400> 338

Thr Gln Gln Arg Asn Asn  
1 5

<210> 339  
<211> 6  
<212> PRT  
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<400> 339

Leu Glu Leu Ser Gln Arg  
1 5

<210> 340  
<211> 14  
<212> PRT  
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<400> 340

Leu Arg Thr Glu Gly Asp Gly Val Tyr Thr Leu Asn Asp Lys  
1 5 10

<210> 341  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 341

Lys Gln Leu Val Glu Ile Glu Lys  
1 5

<210> 342  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 342

Ser Val Pro Pro Ser Ala Ser His Val Ala Pro Thr Glu Thr Phe Thr  
1 5 10 15

Tyr Glu Trp Thr Val Pro Lys  
20

<210> 343  
<211> 16  
<212> PRT  
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<400> 343

Asn Asn Glu Gly Thr Tyr Tyr Ser Pro Asn Tyr Asn Pro Gln Ser Arg  
1 5 10 15

<210> 344  
<211> 15  
<212> PRT  
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<400> 344

Val Phe Ala Ile Pro Pro Ser Phe Ala Ser Ile Phe Leu Thr Lys  
1 5 10 15

<210> 345  
<211> 25  
<212> PRT  
<213> Homo sapiens

<400> 345

His Tyr Thr Asn Pro Ser Gln Asp Val Thr Val Pro Cys Pro Val Pro  
1 5 10 15

Pro Pro Pro Pro Cys Cys His Pro Arg  
20 25

<210> 346  
<211> 19  
<212> PRT  
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<400> 346

Val Val Ser Val Leu Thr Val Leu His Gln Asn Trp Leu Asp Gly Lys  
1 5 10 15

Glu Tyr Lys

<210> 347  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 347

Asp Phe Thr Cys Val His Gln Ala Leu Lys  
1 5 10

<210> 348

<211> 9  
<212> PRT  
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<400> 348

Leu Leu Ile Tyr Gly Ala Ser Ser Arg  
1 5

<210> 349  
<211> 11  
<212> PRT  
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<400> 349

Lys Ala Ala Cys Leu Asp Ile Leu Met Leu Arg  
1 5 10

<210> 350  
<211> 15  
<212> PRT  
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<400> 350

Asp Val Trp Gly Ile Glu Gly Pro Ile Asp Ala Ala Phe Thr Arg  
1 5 10 15

<210> 351  
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<212> PRT  
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<400> 351

Glu Asp Thr Asn Lys Trp Lys  
1 5

<210> 352  
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<400> 352

Ala Asn Ala Gly Lys Pro Lys Asp Pro Thr Phe Ile Pro Ala Pro Ile  
1 5 10 15

Gln Ala Lys

<210> 353  
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<400> 353

Ala Val Tyr Asp Gln Ser Ala Thr Ala  
1 5

<210> 354  
<211> 12  
<212> PRT  
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<400> 354

Asp Ser Ser Thr Trp Leu Thr Ala Phe Val Leu Lys  
1 5 10

<210> 355  
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<212> PRT  
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<400> 355

Pro Met Pro Val Leu Leu Met Gly Gln Ala  
1 5 10

<210> 356  
<211> 18  
<212> PRT  
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<400> 356

Ser Glu Thr Glu Ile His Gln Gly Phe Gln His Leu His Gln Leu Phe  
1 5 10 15

Ala Lys

<210> 357  
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<212> PRT  
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<400> 357

Lys Tyr Phe Ile Asp Phe Val Ala Arg

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5

<210> 358  
<211> 14  
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<220>  
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<222> (6)..(6)  
<223> carboxymethylation

<400> 358

Glu Glu Pro Ile Pro Cys Thr Ala His Trp His Phe Gly Gln  
1 5 10

<210> 359  
<211> 13  
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<213> Homo sapiens

<400> 359

His Asn Leu Lys Asp Ala Gly Glu Ala Glu Glu Gly Lys  
1 5 10

<210> 360  
<211> 13  
<212> PRT  
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<400> 360

Gly Leu Ser Arg Thr Ser Met Lys Pro Arg Ser Ser Arg  
1 5 10

<210> 361  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 361

Asp Ser Ser Tyr Met Pro Ser  
1 5

<210> 362  
<211> 5  
<212> PRT  
<213> Homo sapiens



<400> 362

Leu Pro Leu Ile Lys  
1 5

<210> 363

<211> 10

<212> PRT

<213> Homo sapiens

<400> 363

Ile Ala Glu Phe Ala Phe Glu Tyr Ala Arg  
1 5 10

<210> 364

<211> 10

<212> PRT

<213> Homo sapiens

<400> 364

Glu Gly Lys Leu Glu Asn Gly Tyr Arg Lys  
1 5 10

<210> 365

<211> 15

<212> PRT

<213> Homo sapiens

<400> 365

Pro Gln Leu Asp Leu Phe Ser Cys Met Leu Lys His Arg Leu Lys  
1 5 10 15

<210> 366

<211> 21

<212> PRT

<213> Homo sapiens

<400> 366

Glu Ala Pro Thr Ser Leu Ser Gln Leu Leu Asp Asn Ser Gly Ala Pro  
1 5 10 15

Asn Val Thr Ile Lys  
20

<210> 367

<211> 9

<212> PRT  
<213> Homo sapiens

<400> 367

Lys Val Asn Glu Lys Asp Val Asp Lys  
1 5

<210> 368  
<211> 17  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (5)..(5)  
<223> carboxymethylation

<400> 368

Gly Gln Glu Leu Cys Ala Asp Tyr Ser Glu Asn Thr Phe Thr Glu Tyr  
1 5 10 15

Lys

<210> 369  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 369

Lys Asn Gly Asn Val Ala Asn Tyr Val  
1 5

<210> 370  
<211> 12  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)..(1)  
<223> oxidation

<400> 370

Met Pro Val Ile Asn Ile Glu Asp Leu Thr Glu Lys  
1 5 10

<210> 371  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 371

Leu Gly Lys Ser Val Val Ala Lys Val Lys  
1 5 10

<210> 372  
<211> 7  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (2)..(2)  
<223> oxidation

<400> 372

Ile Met Lys Asp Val Gln Lys  
1 5

<210> 373  
<211> 16  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (8)..(8)  
<223> carboxymethylation

<400> 373

Ala Asn Pro Gly Tyr Lys Trp Cys Pro Thr Thr Asn Lys Pro Val Lys  
1 5 10 15

<210> 374  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 374

Leu Gly Asp Phe Gly Ile Arg Leu Leu Cys Val Gly  
1 5 10

<210> 375  
<211> 16  
<212> PRT  
<213> Homo sapiens

<400> 375

Phe Asp Asp Gln Asn Leu Arg Ser Val Asn Gly Ala Glu Ile Thr Met  
1 5 10 15

<210> 376  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 376

Glu Leu Asp Ser Gln Leu Asn Glu Pro Arg  
1 5 10

<210> 377  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 377

Lys Thr Thr Asn Gln Asn Val Ile Lys  
1 5

<210> 378  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 378

Leu Ser Ser Trp Val Leu Leu Met Lys  
1 5

<210> 379  
<211> 13  
<212> PRT  
<213> Homo sapiens

<400> 379

Thr Leu Val Ile Thr Ser Thr Pro Ala Ser Pro Asn Arg  
1 5 10

<210> 380  
<211> 11

<212> PRT  
<213> Homo sapiens

<400> 380

Lys Gly Ala Ala Lys Val Met Val Thr Asn Val  
1 5 10

<210> 381  
<211> 15  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (3)..(3)  
<223> oxidation

<400> 381

Thr Glu Met Arg Asn Ser Glu Asn Lys Asn Ile Phe Cys Val Arg  
1 5 10 15

<210> 382  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 382

Thr Gln Thr Val Glu Cys Thr Gln Thr Gly Ser Val  
1 5 10

<210> 383  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 383

Lys Met Lys Glu Ala Ala Gln Arg Tyr Gln Tyr Ala  
1 5 10

<210> 384  
<211> 11  
<212> PRT  
<213> Homo sapiens

<400> 384

Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg  
1 5 10

<210> 385  
<211> 27  
<212> PRT  
<213> Homo sapiens

<400> 385

Met Gly Pro Gly Gly Lys Ala Lys Ala Leu Gly Gly Ala Gly Ser  
1 5 10 15

Gly Ser Lys Gly Ser Ala Gly Gly Gly Ser Lys  
20 25

<210> 386  
<211> 19  
<212> PRT  
<213> Homo sapiens

<400> 386

Thr Gly Asn Asn Arg Ile Asn Ile Thr Glu Thr Gly Gln Leu Met Val  
1 5 10 15

Lys Asp Phe

<210> 387  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 387

Leu Glu Leu Phe Met Gly Lys  
1 5

<210> 388  
<211> 21  
<212> PRT  
<213> Homo sapiens

<400> 388

Glu Leu Gly Val Asp Gln Glu Ser Glu Glu Gly Lys Gly Lys Thr Ser  
1 5 10 15

Pro Asp Lys Gln Lys  
20

<210> 389  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 389

Asn Ala Asn Ala Val Cys Asp Thr  
1 5

<210> 390  
<211> 8  
<212> PRT  
<213> Homo sapiens

<400> 390

Met Pro Gln Val Phe Asn Phe Leu  
1 5

<210> 391  
<211> 16  
<212> PRT  
<213> Homo sapiens

<400> 391

Ile Ala Pro Gln Leu Ser Thr Glu Glu Leu Val Ser Leu Gly Glu Lys  
1 5 10 15

<210> 392  
<211> 17  
<212> PRT  
<213> Homo sapiens

<400> 392

Glu Cys Gly Lys Ala Phe Tyr Ser Gly Ser Ser Leu Thr Gln His Gln  
1 5 10 15

Arg

<210> 393  
<211> 11  
<212> PRT  
<213> Homo sapiens

<400> 393

Phe Val Pro Gln Asp Val Pro Pro Glu Pro Lys

1 5 10

<210> 394  
<211> 6  
<212> PRT  
<213> Homo sapiens

<400> 394

Leu Thr Leu Asp Glu Lys  
1 5

<210> 395  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 395

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly  
1 5 10 15

Asp Arg

<210> 396  
<211> 859  
<212> PRT  
<213> Homo sapiens

<400> 396

Pro Arg Phe Leu Val Ala Leu Ile Ser Arg Arg Ser Arg His Arg Ala  
1 5 10 15

Gly Met Arg Tyr Lys Arg Arg Gly Val Asp Lys Asn Gly Asn Val Ala  
20 25 30

Asn Tyr Val Glu Thr Glu Gln Leu Ile His Val His Asn His Thr Leu  
35 40 45

Ser Phe Val Gln Thr Arg Gly Ser Val Pro Val Phe Trp Ser Gln Val  
50 55 60

Gly Tyr Arg Tyr Asn Pro Arg Pro Arg Leu Asp Arg Ser Glu Lys Glu  
65 70 75 80

Thr Val Ala Tyr Phe Cys Ala His Phe Glu Glu Gln Leu Asn Ile Tyr



85

90

95

Lys Lys Gln Val Ile Ile Asn Leu Val Asp Gln Ala Gly Arg Glu Lys  
 100 105 110

Ile Ile Gly Asp Ala Tyr Leu Lys Gln Val Leu Leu Phe Asn Asn Ser  
 115 120 125

His Leu Thr Tyr Val Ser Phe Asp Phe His Glu His Cys Arg Gly Met  
 130 135 140

Lys Phe Glu Asn Val Gln Thr Leu Thr Asp Ala Ile Tyr Asp Ile Ile  
 145 150 155 160

Leu Asp Met Lys Trp Cys Trp Val Asp Glu Ala Gly Val Ile Cys Lys  
 165 170 175

Gln Glu Gly Ile Phe Arg Val Asn Cys Met Asp Cys Leu Asp Arg Thr  
 180 185 190

Asn Val Val Gln Ala Ala Ile Ala Arg Val Val Met Glu Gln Gln Leu  
 195 200

Lys Lys Leu Gly Val Met Pro Pro Glu Gln Pro Leu Pro Val Lys Cys  
 210 215 220

Asn Arg Ile Tyr Gln Ile Met Trp Ala Asn Asn Gly Asp Ser Ile Ser  
 225 230 235 240

Arg Gln Tyr Ala Gly Thr Ala Ala Leu Lys Gly Asp Phe Thr Arg Thr  
 245 250 255

Gly Glu Arg Lys Leu Ala Gly Val Met Lys Asp Gly Val Asn Ser Ala  
 260 265

Asn Arg Tyr Tyr Leu Asn Arg Phe Lys Asp Ala Tyr Arg Gln Ala Val  
 275 280 285

Ile Asp Leu Met Gln Gly Ile Pro Val Thr Glu Asp Leu Tyr Ser Ile  
 290 295 300

Phe Thr Lys Glu Lys Glu His Glu Ala Leu His Lys Glu Asn Gln Arg  
 305 310 315 320

Ser His Gln Glu Leu Ile Ser Gln Leu Leu Gln Ser Tyr Met Lys Leu  
325 330 335

Leu Leu Pro Asp Asp Glu Lys Phe His Gly Gly Trp Ala Leu Ile Asp  
340 345 350

Cys Asp Pro Ser Leu Ile Asp Ala Thr His Arg Asp Val Asp Val Leu  
355 360 365

Leu Leu Leu Ser Asn Ser Ala Tyr Tyr Val Ala Tyr Tyr Asp Asp Glu  
370 375 380

Val Asp Lys Val Asn Gln Tyr Gln Arg Leu Ser Leu Glu Asn Leu Glu  
385 390 395 400

Lys Ile Glu Ile Gly Pro Glu Pro Thr Leu Phe Gly Lys Pro Lys Phe  
405 410 415

Ser Cys Met Arg Leu His Tyr Arg Tyr Lys Glu Ala Ser Gly Tyr Phe  
420 425 430

His Thr Leu Arg Ala Val Met Arg Asn Pro Glu Glu Asp Gly Lys Asp  
435 440 445

Thr Leu Gln Cys Ile Ala Glu Met Leu Gln Ile Thr Lys Gln Ala Met  
450 455 460

Gly Ser Asp Leu Pro Ile Ile Glu Lys Lys Leu Glu Arg Lys Ser Ser  
465 470 475 480

Lys Pro His Glu Asp Ile Ile Gly Ile Arg Ser Gln Asn Gln Gly Ser  
485 490 495

Leu Ala Gln Gly Lys Asn Phe Leu Met Ser Lys Phe Ser Ser Leu Asn  
500 505 510

Gln Lys Val Lys Gln Thr Lys Ser Asn Val Asn Ile Gly Asn Leu Arg  
515 520 525

Lys Leu Gly Asn Phe Thr Lys Pro Glu Met Lys Val Asn Phe Leu Lys  
530 535 540

Pro Asn Leu Lys Val Asn Leu Trp Lys Ser Asp Ser Ser Leu Glu Thr  
545 550 555 560

Met Glu Asn Thr Gly Val Met Asp Lys Val Gln Ala Glu Ser Asp Gly  
565 570 575

Asp Met Ser Ser Asp Asn Asp Ser Tyr His Ser Asp Glu Phe Leu Thr  
580 585 590

Asn Ser Lys Ser Asp Glu Asp Arg Gln Leu Ala Asn Ser Leu Glu Ser  
595 600 605

Val Gly Pro Ile Asp Tyr Val Leu Pro Ser Cys Gly Ile Ile Ala Ser  
610 615 620

Ala Pro Arg Leu Gly Ser Arg Ser Gln Ser Leu Ser Ser Thr Asp Ser  
625 630 635 640

Ser Val His Ala Pro Ser Glu Ile Thr Val Ala His Gly Ser Gly Leu  
645 650 655

Gly Lys Gly Gln Glu Ser Pro Leu Lys Lys Ser Pro Ser Ala Gly Asp  
660 665 670

Val His Ile Leu Thr Gly Phe Ala Lys Pro Met Asp Ile Tyr Cys His  
675 680 685

Arg Phe Val Gln Asp Ala Gln Asn Lys Val Thr His Leu Ser Glu Thr  
690 695 700

Arg Ser Val Ser Gln Gln Ala Ser Gln Glu Arg Asn Gln Met Thr Asn  
705 710 715 720

Gln Val Ser Asp Glu Thr Gln Ser Glu Ser Thr Glu Gln Thr Pro Ser  
725 730 735

Arg Pro Ser Gln Leu Asp Val Ser Leu Ser Ala Thr Gly Pro Gln Phe  
740 745 750

Leu Ser Val Glu Pro Ala His Ser Val Ala Ser Gln Lys Thr Pro Thr  
755 760 765

Ser Ala Ser Ser Met Leu Glu Leu Glu Thr Gly Leu His Val Thr Pro  
770 775 780

Ser Pro Ser Glu Ser Ser Ser Ser Arg Ala Val Ser Pro Phe Ala Lys  
785 790 795 800

Ile Arg Ser Ser Met Val Gln Val Ala Ser Ile Thr Gln Ala Gly Leu  
805 810 815

Thr His Gly Ile Asn Phe Ala Val Ser Lys Val Gln Lys Ser Pro Pro  
820 825 830

Glu Pro Glu Ile Ile Asn Gln Val Gln Gln Asn Glu Leu Lys Lys Met  
835 840 845

Phe Ile Gln Cys Gln Thr Arg Ile Ile Gln Ile  
850 855

<210> 397  
<211> 853  
<212> PRT  
<213> Homo sapiens

<400> 397

Met Val Met Ser His Pro His Ala Val Asn Glu Ile Ala Leu Ser Leu  
1 5 10 15

Asn Asn Lys Asn Pro Arg Thr Lys Ala Leu Val Leu Glu Leu Leu Ala  
20 25 30

Ala Val Cys Leu Val Arg Gly Gly His Glu Ile Ile Leu Ser Ala Phe  
35 40 45

Asp Asn Phe Lys Glu Val Cys Gly Glu Lys Gln Arg Phe Glu Lys Leu  
50 55 60

Met Glu His Phe Arg Asn Glu Asp Asn Asn Ile Asp Phe Met Val Ala  
65 70 75 80

Ser Met Gln Phe Ile Asn Ile Val Val His Ser Val Glu Asp Met Asn  
85 90 95

Phe Arg Val His Leu Gln Tyr Glu Phe Thr Lys Leu Gly Leu Asp Glu  
100 105 110

Tyr Leu Asp Lys Leu Lys His Thr Glu Ser Asp Lys Leu Gln Val Gln  
115 120 125

Asp Ala Glu Thr Lys Asn Ala Ala Leu Glu Arg Val Glu Glu Leu Glu  
145 150 155 160

Ala Met Ser Lys Ile Val Glu Leu Glu Lys Gln Leu Met Gln Arg Asn  
180 185 190

Val His Thr Leu Arg Lys Met Val Lys Glu Lys Glu Glu Ala Ile Gln  
210 215 220

Thr Ile Lys Ile Gln Lys Lys Gly Asp Gly Asp Ile Ala Ile Leu Pro  
245 250 255

Val Val Ala Ser Gly Thr Leu Ser Met Gly Ser Glu Val Val Ala Gly  
260 265 270

Asn Ser Val Gly Pro Thr Met Gly Ala Ala Ser Ser Gly Pro Leu Pro  
275 280 285

Pro Pro Pro Pro Pro Leu Pro Pro Ser Ser Asp Thr Pro Glu Thr Val  
290 295 300

Gln Asn Gly Pro Val Thr Pro Pro Met Pro Pro Pro Pro Pro Pro  
305 310 315 320

Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Leu	Pro
				325				330						335	

Gly Pro Ala Ala Glu Thr Val Pro Ala Pro Pro Leu Ala Pro Pro Leu  
340 345 350

Pro Ser Ala Pro Pro Leu Pro Gly Thr Ser Ser Pro Thr Val Val Phe  
355 360 365

Asn Ser Gly Leu Ala Ala Val Lys Ile Lys Lys Pro Ile Lys Thr Lys  
370 375 380

Phe Arg Met Pro Val Phe Asn Trp Val Ala Leu Lys Pro Asn Gln Ile  
385 390 395 400

Asn Gly Thr Val Phe Asn Glu Ile Asp Asp Glu Arg Ile Leu Glu Asp  
405 410 415

Leu Asn Val Asp Glu Phe Glu Glu Ile Phe Lys Thr Lys Ala Gln Gly  
420 425 430

Pro Ala Ile Asp Leu Ser Ser Ser Lys Gln Lys Ile Pro Gln Lys Gly  
435 440 445

Ser Asn Lys Val Thr Leu Leu Glu Ala Asn Arg Ala Lys Asn Leu Ala  
450 455 460

Ile Thr Leu Arg Lys Ala Gly Lys Thr Ala Asp Glu Ile Cys Lys Ala  
465 470 475 480

Ile His Val Phe Asp Leu Lys Thr Leu Pro Val Asp Phe Val Glu Cys  
485 490 495

Leu Met Arg Phe Leu Pro Thr Glu Asn Glu Val Lys Val Leu Arg Leu  
500 505 510

Tyr Glu Arg Glu Arg Lys Pro Leu Glu Asn Leu Ser Asp Glu Asp Arg  
515 520 525

Phe Met Met Gln Phe Ser Lys Ile Glu Arg Leu Met Gln Lys Met Thr  
530 535 540

Ile Met Ala Phe Ile Gly Asn Phe Ala Glu Ser Ile Gln Met Leu Thr  
545 550 555 560

Pro Gln Leu His Ala Ile Ile Ala Ala Ser Val Ser Ile Lys Ser Ser  
565 570 575

Gln Lys Leu Lys Lys Ile Leu Glu Ile Ile Leu Ala Leu Gly Asn Tyr  
580 585 590

Met Asn Ser Ser Lys Arg Gly Ala Val Tyr Gly Phe Lys Leu Gln Ser  
595 600 605

Leu Asp Leu Leu Leu Asp Thr Lys Ser Thr Asp Arg Lys Gln Thr Leu  
610 615 620

Leu His Tyr Ile Ser Asn Val Val Lys Glu Lys Tyr His Gln Val Ser  
625 630 635 640

Leu Phe Tyr Asn Glu Leu His Tyr Val Glu Lys Ala Ala Ala Val Ser  
645 650 655

Leu Glu Asn Val Leu Leu Asp Val Lys Glu Leu Gln Arg Gly Met Asp  
660 665 670

Leu Thr Lys Arg Glu Tyr Thr Met His Asp His Asn Thr Leu Leu Lys  
675 680 685

Glu Phe Ile Leu Asn Asn Glu Gly Lys Leu Lys Lys Leu Gln Asp Asp  
690 695 700

Ala Lys Ile Ala Gln Asp Ala Phe Asp Asp Val Val Lys Tyr Phe Gly  
705 710 715 720

Glu Asn Pro Lys Thr Thr Pro Pro Ser Val Phe Phe Pro Val Phe Val  
725 730 735

Arg Phe Val Lys Ala Tyr Lys Gln Ala Glu Glu Glu Asn Glu Leu Arg  
740 745 750

Lys Lys Gln Glu Gln Ala Leu Met Glu Lys Leu Leu Glu Gln Glu Ala  
755 760 765

Leu Met Glu Gln Gln Asp Pro Lys Ser Pro Ser His Lys Ser Lys Arg  
770 775 780

Gln Gln Gln Glu Leu Ile Ala Glu Leu Arg Arg Arg Gln Val Lys Asp

785 790 795 800

Asn Arg His Val Tyr Glu Gly Lys Asp Gly Ala Ile Glu Asp Ile Ile  
805 810 815

Thr Asp Leu Arg Asn Gln Pro Tyr Arg Arg Ala Asp Ala Val Arg Arg  
820 825 830

Ser Val Arg Arg Arg Phe Asp Asp Gln Asn Leu Arg Ser Val Asn Gly  
835 840 845

Ala Glu Ile Thr Met  
850

<210> 398  
<211> 347  
<212> PRT  
<213> Homo sapiens

<400> 398

Met Ser Ser Trp Ser Arg Gln Arg Pro Lys Ser Pro Gly Gly Ile Gln  
1 5 10 15

Pro His Val Ser Arg Thr Leu Phe Leu Leu Leu Leu Ala Ala Ser  
20 25 30

Ala Trp Gly Val Thr Leu Ser Pro Lys Asp Cys Gln Val Phe Arg Ser  
35 40 45

Asp His Gly Ser Ser Ile Ser Cys Gln Pro Pro Ala Glu Ile Pro Gly  
50 55 60

Tyr Leu Pro Ala Asp Thr Val His Leu Ala Val Glu Phe Phe Asn Leu  
65 70 75 80

Thr His Leu Pro Ala Asn Leu Leu Gln Gly Ala Ser Lys Leu Gln Glu  
85 90 95

Leu His Leu Ser Ser Asn Gly Leu Glu Ser Leu Ser Pro Glu Phe Leu  
100 105 110

Arg Pro Val Pro Gln Leu Arg Val Leu Asp Leu Thr Arg Asn Ala Leu  
115 120 125



Thr Gly Leu Pro Pro Gly Leu Phe Gln Ala Ser Ala Thr Leu Asp Thr  
130 135 140

Leu Val Leu Lys Glu Asn Gln Leu Glu Val Leu Glu Val Ser Trp Leu  
145 150 155 160

His Gly Leu Lys Ala Leu Gly His Leu Asp Leu Ser Gly Asn Arg Leu  
165 170 175

Arg Lys Leu Pro Pro Gly Leu Leu Ala Asn Phe Thr Leu Leu Arg Thr  
180 185 190

Leu Asp Leu Gly Glu Asn Gln Leu Glu Thr Leu Pro Pro Asp Leu Leu  
195 200 205

Arg Gly Pro Leu Gln Leu Glu Arg Leu His Leu Glu Gly Asn Lys Leu  
210 215 220

Gln Val Leu Gly Lys Asp Leu Leu Leu Pro Gln Pro Asp Leu Arg Tyr  
225 230 235 240

Leu Phe Leu Asn Gly Asn Lys Leu Ala Arg Val Ala Ala Gly Ala Phe  
245 250 255

Gln Gly Leu Arg Gln Leu Asp Met Leu Asp Leu Ser Asn Asn Ser Leu  
260 265 270

Ala Ser Val Pro Glu Gly Leu Trp Ala Ser Leu Gly Gln Pro Asn Trp  
275 280 285

Asp Met Arg Asp Gly Phe Asp Ile Ser Gly Asn Pro Trp Ile Cys Asp  
290 295 300

Gln Asn Leu Ser Asp Leu Tyr Arg Trp Leu Gln Ala Gln Lys Asp Lys  
305 310 315 320

Met Phe Ser Gln Asn Asp Thr Arg Cys Ala Gly Pro Glu Ala Val Lys  
325 330 335

Gly Gln Thr Leu Leu Ala Val Ala Lys Ser Gln  
340 345

<210> 399  
<211> 782  
<212> PRT  
<213> Homo sapiens

<400> 399

Met Ala Pro His Arg Pro Ala Pro Ala Leu Leu Cys Ala Leu Ser Leu  
1 5 10 15

Ala Leu Cys Ala Leu Ser Leu Pro Val Arg Ala Ala Thr Ala Ser Arg  
20 25 30

Gly Ala Ser Gln Ala Gly Ala Pro Gln Gly Arg Val Pro Glu Ala Arg  
35 40 45

Pro Asn Ser Met Val Val Glu His Pro Glu Phe Leu Lys Ala Gly Lys  
50 55 60

Glu Pro Gly Leu Gln Ile Trp Arg Val Glu Lys Phe Asp Leu Val Pro  
65 70 75 80

Val Pro Thr Asn Leu Tyr Gly Asp Phe Phe Thr Gly Asp Ala Tyr Val  
85 90 95

Ile Leu Lys Thr Val Gln Leu Arg Asn Gly Asn Leu Gln Tyr Asp Leu  
100 105 110

His Tyr Trp Leu Gly Asn Glu Cys Ser Gln Asp Glu Ser Gly Ala Ala  
115 120 125

Ala Ile Phe Thr Val Gln Leu Asp Asp Tyr Leu Asn Gly Arg Ala Val  
130 135 140

Gln His Arg Glu Val Gln Gly Phe Glu Ser Ala Thr Phe Leu Gly Tyr  
145 150 155 160

Phe Lys Ser Gly Leu Lys Tyr Lys Lys Gly Gly Val Ala Ser Gly Phe  
165 170 175

Lys His Val Val Pro Asn Glu Val Val Val Gln Arg Leu Phe Gln Val  
180 185 190

Lys Gly Arg Arg Val Val Arg Ala Thr Glu Val Pro Val Ser Trp Glu  
195 200 205

Ser Phe Asn Asn Gly Asp Cys Phe Ile Leu Asp Leu Gly Asn Asn Ile  
210 215 220

His Gln Trp Cys Gly Ser Asn Ser Asn Arg Tyr Glu Arg Leu Lys Ala  
225 230 235 240

Thr Gln Val Ser Lys Gly Ile Arg Asp Asn Glu Arg Ser Gly Arg Ala  
245 250 255

Arg Val His Val Ser Glu Glu Gly Thr Glu Pro Glu Ala Met Leu Gln  
260 265 270

Val Leu Gly Pro Lys Pro Ala Leu Pro Ala Gly Thr Glu Asp Thr Ala  
275 280 285

Lys Glu Asp Ala Ala Asn Arg Lys Leu Ala Lys Leu Tyr Lys Val Ser  
290 295 300

Asn Gly Ala Gly Thr Met Ser Val Ser Leu Val Ala Asp Glu Asn Pro  
305 310 315 320

Phe Ala Gln Gly Ala Leu Lys Ser Glu Asp Cys Phe Ile Leu Asp His  
325 330 335

Gly Lys Asp Gly Lys Ile Phe Val Trp Lys Gly Lys Gln Ala Asn Thr  
340 345 350

Glu Glu Arg Lys Ala Ala Leu Lys Thr Ala Ser Asp Phe Ile Thr Lys  
355 360 365

Met Asp Tyr Pro Lys Gln Thr Gln Val Ser Val Leu Pro Glu Gly Gly  
370 375 380

Glu Thr Pro Leu Phe Lys Gln Phe Phe Lys Asn Trp Arg Asp Pro Asp  
385 390 395 400

Gln Thr Asp Gly Leu Gly Leu Ser Tyr Leu Ser Ser His Ile Ala Asn  
405 410 415

Val Glu Arg Val Pro Phe Asp Ala Ala Thr Leu His Thr Ser Thr Ala  
420 425 430

Met Ala Ala Gln His Gly Met Asp Asp Asp Gly Thr Gly Gln Lys Gln  
435 440 445

Ile Trp Arg Ile Glu Gly Ser Asn Lys Val Pro Val Asp Pro Ala Thr  
450 455 460

Tyr Gly Gln Phe Tyr Gly Gly Asp Ser Tyr Ile Ile Leu Tyr Asn Tyr  
465 470 475 480

Arg His Gly Gly Arg Gln Gly Gln Ile Ile Tyr Asn Trp Gln Gly Ala  
485 490 495

Gln Ser Thr Gln Asp Glu Val Ala Ala Ser Ala Ile Leu Thr Ala Gln  
500 505 510

Leu Asp Glu Glu Leu Gly Gly Thr Pro Val Gln Ser Arg Val Val Gln  
515 520 525

Gly Lys Glu Pro Ala His Leu Met Ser Leu Phe Gly Gly Lys Pro Met  
530 535 540

Ile Ile Tyr Lys Gly Gly Thr Ser Arg Glu Gly Gly Gln Thr Ala Pro  
545 550 555 560

Ala Ser Thr Arg Leu Phe Gln Val Arg Ala Asn Ser Ala Gly Ala Thr  
565 570 575

Arg Ala Val Glu Val Leu Pro Lys Ala Gly Ala Leu Asn Ser Asn Asp  
580 585 590

Ala Phe Val Leu Lys Thr Pro Ser Ala Ala Tyr Leu Trp Val Gly Thr  
595 600 605

Gly Ala Ser Glu Ala Glu Lys Thr Gly Ala Gln Glu Leu Leu Arg Val  
610 615 620

Leu Arg Ala Gln Pro Val Gln Val Ala Glu Gly Ser Glu Pro Asp Gly  
625 630 635 640

Phe Trp Glu Ala Leu Gly Gly Lys Ala Ala Tyr Arg Thr Ser Pro Arg  
645 650 655

Leu Lys Asp Lys Lys Met Asp Ala His Pro Pro Arg Leu Phe Ala Cys  
660 665 670

Ser Asn Lys Ile Gly Arg Phe Val Ile Glu Glu Val Pro Gly Glu Leu  
675 680 685

Met Gln Glu Asp Leu Ala Thr Asp Asp Val Met Leu Leu Asp Thr Trp  
690 695 700

Asp Gln Val Phe Val Trp Val Gly Lys Asp Ser Gln Glu Glu Glu Lys  
705 710 715 720

Thr Glu Ala Leu Thr Ser Ala Lys Arg Tyr Ile Glu Thr Asp Pro Ala  
725 730 735

Asn Arg Asp Arg Arg Thr Pro Ile Thr Val Val Lys Gln Gly Phe Glu  
740 745 750

Pro Pro Ser Phe Val Gly Trp Phe Leu Gly Trp Asp Asp Asp Tyr Trp  
755 760 765

Ser Val Asp Pro Leu Asp Arg Ala Met Ala Glu Leu Ala Ala  
770 775 780

<210> 400  
<211> 338  
<212> PRT  
<213> Homo sapiens

<400> 400

Met Ser Leu Ser Ala Phe Thr Leu Phe Leu Ala Leu Ile Gly Gly Thr  
1 5 10 15

Ser Gly Gln Tyr Tyr Asp Tyr Asp Phe Pro Leu Ser Ile Tyr Gly Gln  
20 25 30

Ser Ser Pro Asn Cys Ala Pro Glu Cys Asn Cys Pro Glu Ser Tyr Pro  
35 40 45

Ser Ala Met Tyr Cys Asp Glu Leu Lys Leu Lys Ser Val Pro Met Val  
50 55 60

Pro Pro Gly Ile Lys Tyr Leu Tyr Leu Arg Asn Asn Gln Ile Asp His  
65 70 75 80

Ile Asp Glu Lys Ala Phe Glu Asn Val Thr Asp Leu Gln Trp Leu Ile  
85 90 95

Leu Asp His Asn Leu Leu Glu Asn Ser Lys Ile Lys Gly Arg Val Phe  
100 105 110

Ser Lys Leu Lys Gln Leu Lys Lys Leu His Ile Asn His Asn Asn Leu  
115 120 125

Thr Glu Ser Val Gly Pro Leu Pro Lys Ser Leu Glu Asp Leu Gln Leu  
130 135 140

Thr His Asn Lys Ile Thr Lys Leu Gly Ser Phe Glu Gly Leu Val Asn  
145 150 155 160

Leu Thr Phe Ile His Leu Gln His Asn Arg Leu Lys Glu Asp Ala Val  
165 170 175

Ser Ala Ala Phe Lys Gly Leu Lys Ser Leu Glu Tyr Leu Asp Leu Ser  
180 185 190

Phe Asn Gln Ile Ala Arg Leu Pro Ser Gly Leu Pro Val Ser Leu Leu  
195 200 205

Thr Leu Tyr Leu Asp Asn Asn Lys Ile Ser Asn Ile Pro Asp Glu Tyr  
210 215 220

Phe Lys Arg Phe Asn Ala Leu Gln Tyr Leu Arg Leu Ser His Asn Glu  
225 230 235 240

Leu Ala Asp Ser Gly Ile Pro Gly Asn Ser Phe Asn Val Ser Ser Leu  
245 250 255

Val Glu Leu Asp Leu Ser Tyr Asn Lys Leu Lys Asn Ile Pro Thr Val  
260 265 270

Asn Glu Asn Leu Glu Asn Tyr Tyr Leu Glu Val Asn Gln Leu Glu Lys  
275 280 285

Phe Asp Ile Lys Ser Phe Cys Lys Ile Leu Gly Pro Leu Ser Tyr Ser  
290 295 300

Lys Ile Lys His Leu Arg Leu Asp Gly Asn Arg Ile Ser Glu Thr Ser  
305 310 315 320

Leu Pro Pro Asp Met Tyr Glu Cys Leu Arg Val Ala Asn Glu Val Thr  
325 330 335

Leu Asn